

IN THE CLAIMS

For the convenience of the Examiner, all pending claims of the Application are reproduced below.

1. (Currently Amended) A method for label edge routing in a wireless network, comprising:

establishing a data session between a mobile unit and a serving node,  
wherein a forwarding information base included in the mobile unit is populated with a label stack associated with the data session;  
receiving, at the mobile unit, an agent advertisement with label information;  
correlating the label information to the data session, wherein the mobile unit is operable to:

allocate a session specific label in response to session activity associated with an end user of the mobile unit;

communicate a new label stack to the serving node such that the serving node can perform routing at a layer two level; and

classify the data ~~session~~ session;  
store one or more flow labels for a plurality of applications of the mobile unit;

classify one or more flows using one or more flow characteristics;

and

provision one or more of the flow labels for one or more of the flows based on one or more of the flow characteristics.

2. (Previously Presented) The method of Claim 1, further comprising:  
communicating one or more traffic characteristics associated with the end user to the serving node along with the new label stack.

3. (Canceled)

4. (Previously Presented) The method of Claim 1, further comprising:  
populating available information in a vendor extension field that is included as part of an agent solicitation message that is sent to the serving node by the mobile unit.
5. (Previously Presented) The method of Claim 1, further comprising:  
removing, at the mobile unit, an inbound label stack from each of a plurality of inbound packets; and  
forwarding the plurality of inbound packets to an application included in the mobile unit.
6. (Previously Presented) The method of Claim 1, further comprising:  
generating, at the mobile unit, a label request for an application;  
receiving at, the mobile unit, a label response based on the label request, the label response comprising at least one label;  
determining, at the mobile unit, flow characteristics and a flow label for a flow, the flow label comprising one of the labels in the label response; and  
storing, at the mobile unit, the flow characteristics and the flow label for the flow.
7. (Previously Presented) The method of Claim 6, wherein the label response is based on a label allocation performed at a label server, the label server coupled to the network.
8. (Previously Presented) The method of Claim 6, further comprising:  
generating a label request comprising generating an agent solicitation message, the agent solicitation message comprising a vendor-specific extension, the vendor-specific extension comprising the label request.

9. (Previously Presented) The method of Claim 6, further comprising:  
receiving the agent advertisement message, the agent advertisement message comprising a vendor-specific extension, the vendor-specific extension comprising the label response.

10. (Previously Presented) The method of Claim 6, further comprising:  
determining, at the mobile unit, whether the mobile unit supports label switching; and  
determining, at the mobile unit, whether the serving node supports label switching.

11. (Currently Amended) A method for label edge routing in a wireless network, comprising:

means for establishing a data session between a mobile unit and a serving node, wherein

means for forwarding information base included in the mobile unit is populated with a label stack associated with the data session;

means for receiving, at the mobile unit, an agent advertisement with label information;

means for correlating the label information to the data session, wherein the mobile unit is operable to:

allocate a session specific label in response to session activity associated with an end user of the mobile unit;

communicate a new label stack to the serving node such that the serving node can perform routing at a layer two level; and

classify the data session ~~session~~;

**store one or more flow labels for a plurality of applications of the mobile unit;**

**classify one or more flows using one or more flow characteristics;**

**and**

**provision one or more of the flow labels for one or more of the flows based on one or more of the flow characteristics.**

12. (Previously Presented) The system of Claim 11, further comprising:  
means for communicating one or more traffic characteristics associated with the end user to the serving node along with the new label stack.

13. (Canceled)

14. (Previously Presented) The system of Claim 11, further comprising:  
means for populating available information in a vendor extension field that is included as part of an agent solicitation message that is sent to the serving node by the mobile unit.

15. (Previously Presented) The system of Claim 11, further comprising:  
means for removing, at the mobile unit, an inbound label stack from each of a plurality of inbound packets; and  
means for forwarding the plurality of inbound packets to an application included in the mobile unit.

16. (Previously Presented) The system of Claim 11, further comprising:  
means for generating, at the mobile unit, a label request for an application;  
means for receiving at, the mobile unit, a label response based on the label request, the label response comprising at least one label;  
means for determining, at the mobile unit, flow characteristics and a flow label for a flow, the flow label comprising one of the labels in the label response; and  
means for storing, at the mobile unit, the flow characteristics and the flow label for the flow.

17. (Previously Presented) The system of Claim 16, wherein the label response is based on a label allocation performed at a label server, the label server coupled to the network.

18. (Previously Presented) The system of Claim 16, wherein the means for generating a label request comprises a means for generating an agent solicitation message, the agent solicitation message comprising a vendor-specific extension, the vendor-specific extension comprising the label request.

19. (Previously Presented) The system of Claim 16, wherein the means for receiving a label response comprises a means for receiving the agent advertisement message, which includes a vendor-specific extension, the vendor-specific extension comprising the label response.

20. (Previously Presented) The system of Claim 16, further comprising:  
means for determining, at the mobile unit, whether the mobile unit supports label switching; and  
means for determining, at the mobile unit, whether the serving node supports label switching.

21. (Currently Amended) A system for label edge routing in a wireless network, comprising:  
a computer-processable medium;  
logic stored on the computer medium, the logic operable to:  
establish a data session between a mobile unit and a serving node, wherein a forwarding information base included in the mobile unit is populated with a label stack associated with the data session;  
receive, at the mobile unit, an agent advertisement with label information;  
correlate the label information to the data session;  
allocate a session specific label in response to session activity associated with an end user of the mobile unit;  
communicate a new label stack to the serving node such that the serving node can perform routing at a layer two level; and  
classify the data ~~session~~ session;  
store one or more flow labels for a plurality of applications of the mobile unit;  
classify one or more flows using one or more flow characteristics; and  
provision one or more of the flow labels for one or more of the flows based on one or more of the flow characteristics.

22. (Previously Presented) The system of Claim 21, the logic being further operable to:

communicate one or more traffic characteristics associated with the end user to the serving node along with the new label stack.

23. (Canceled)

24. (Previously Presented) The system of Claim 23, the logic being further operable to:

populate available information in a vendor extension field that is included as part of an agent solicitation message that is sent to the serving node by the mobile unit.

25. (Previously Presented) The system of Claim 24, the logic further operable to:  
remove an inbound label stack from each of a plurality of inbound packets;  
and

forward the plurality of inbound packets to an application included in the mobile unit.

26. (Previously Presented) The system of Claim 21, the logic further operable to:  
generate a label request for an application;  
receive a label response based on the label request, the label response comprising at least one label;

determine flow characteristics and a flow label for a flow, the flow label comprising one of the labels in the label response; and

store the flow characteristics and the flow label for the flow.

27. (Previously Presented) The system of Claim 26, wherein the label response is based on a label allocation performed at a label server, the label server coupled to the network.

28. (Original) The system of Claim 26, the logic further operable to generate a label request by generating an agent solicitation message, the agent solicitation message comprising a vendor-specific extension, the vendor-specific extension comprising the label request.

29. (Previously Presented) The system of Claim 26, the logic further operable to receive the agent advertisement message, which includes a vendor-specific extension, the vendor-specific extension comprising the label response.

30. (Original) The system of Claim 26, the logic further operable to determine at the mobile unit whether the mobile unit supports label switching and to determine at the mobile unit whether the serving node supports label switching.



31. (Currently Amended) A mobile unit operable to provide label edge routing in a wireless network, comprising:

a service access manager operable to establish a data session between a mobile unit and a serving node,

a forwarding information base included in the mobile unit that is populated with a label stack associated with the data session, the mobile unit receiving an agent advertisement with label information and correlating the label information to the data session, wherein the mobile unit is further operable to:

allocate a session specific label in response to session activity associated with an end user of the mobile unit;

communicate a new label stack to the serving node such that the serving node can perform routing at a layer two level; and

classify the data session; session;

store one or more flow labels for a plurality of applications of the mobile unit;

classify one or more flows using one or more flow characteristics;  
and

provision one or more of the flow labels for one or more of the flows based on one or more of the flow characteristics.

32. (Previously Presented) The mobile unit of Claim 31, wherein the mobile unit is further operable to:

communicate one or more traffic characteristics associated with the end user to the serving node along with the new label stack.

33. (Canceled)

34. (Previously Presented) The mobile unit of Claim 33, wherein the mobile unit is further operable to:

populate available information in a vendor extension field that is included as part of an agent solicitation message that is sent to the serving node by the mobile unit.

35. (Previously Presented) The mobile unit of Claim 34, wherein the mobile unit is further operable to:

remove an inbound label stack from each of a plurality of inbound packets;

and

forward the plurality of inbound packets to an application included in the mobile unit.

36. (Previously Presented) The mobile unit of Claim 31, wherein the mobile unit is further operable to:

generate a label request for an application to:

receive a label response based on the label request, the label response comprising at least one label;

determine flow characteristics and a flow label for a flow, the flow label comprising one of the labels in the label response;; and store the flow characteristics and the flow label for the flow.

37. (Previously Presented) The mobile unit of Claim 36, wherein the label response is based on a label allocation performed at a label server, the label server coupled to the network.

38. (Original) The mobile unit of Claim 36, the flow classifier further operable to generate a label request by generating an agent solicitation message, the agent solicitation message comprising a vendor-specific extension, the vendor-specific extension comprising the label request.

39. (Previously Presented) The mobile unit of Claim 31, wherein the mobile unit includes a list of classes of service assigned to one or more end users associated with the mobile unit.

40. (Previously Presented) The mobile unit of Claim 39, wherein when traffic is received from one or more of the end users, the mobile unit classifies the traffic with one or more labels included in its forwarding information base.

41. (Currently Amended) A method for label edge routing in a wireless network, comprising:

establishing a data session between a mobile unit and a serving node, wherein a forwarding information base included in the mobile unit is populated with a label stack associated with the data session;

receiving an agent advertisement with label information;

correlating the label information to the data session, wherein the mobile unit is operable to:

allocate a session specific label in response to session activity associated with an end user of the mobile unit;

communicate a new label stack to the serving node such that the serving node can perform routing at a layer two level; and

classify the data ~~session~~ session;

store one or more flow labels for a plurality of applications of the mobile unit;

classify one or more flows using one or more flow characteristics;

and

provision one or more of the flow labels for one or more of the flows based on one or more of the flow characteristics.

42. (Previously Presented) The method of Claim 41, further comprising:  
communicating one or more traffic characteristics associated with the end user to the serving node along with the new label stack.

43. (Canceled)

44. (Previously Presented) The method of Claim 41, further comprising:  
populating available information in a vendor extension field that is included as  
part of an agent solicitation message that is sent to the serving node by the mobile unit.

45. (Previously Presented) The method of Claim 44, further comprising:  
removing an inbound label stack from each of a plurality of inbound packets;  
and  
forwarding the plurality of inbound packets to an application included in the  
mobile unit.

46. (Currently Amended) A system for label edge routing in a wireless network,  
comprising:  
means for receiving an agent advertisement with label information from a  
serving node;  
means for correlating the label information to a data session;  
means for allocating a session specific label in response to session activity  
associated with an end user of a mobile unit;  
means for communicating a new label stack to the serving node such that the  
serving node can perform routing at a layer two level; and  
means for classifying the data ~~session~~ session;  
means for storing one or more flow labels for a plurality of applications of  
the mobile unit;  
means for classify one or more flows using one or more flow  
characteristics; and  
means for provision one or more of the flow labels for one or more of the  
flows based on one or more of the flow characteristics.

47. (Previously Presented) The system of Claim 46, further comprising:  
means for communicating one or more traffic characteristics associated with  
the end user to the serving node along with the new label stack.

48. (Canceled)

49. (Previously Presented) The system of Claim 46, further comprising:  
means for populating available information in a vendor extension field that is  
included as part of an agent solicitation message that is sent to the serving node by the mobile  
unit.

50. (Previously Presented) The system of Claim 49, further comprising:  
means for removing an inbound label stack from each of a plurality of inbound  
packets; and  
means for forwarding the plurality of inbound packets to an application  
included in the mobile unit.

51. (Currently Amended) A system for label edge routing in a wireless network, comprising:

a computer-processable medium; and

logic stored on the computer-processable medium, the logic operable to:

establish a data session between a mobile unit and a serving node, wherein a forwarding information base included in the mobile unit is populated with a label stack associated with the data session;

receive an agent advertisement with label information;

correlate the label information to the data session;

allocate a session specific label in response to session activity associated with an end user of the mobile unit;

communicate a new label stack to the serving node such that the serving node can perform routing at a layer two level; and

classify the data session ~~session~~;

**store one or more flow labels for a plurality of applications of the mobile unit;**

**classify one or more flows using one or more flow characteristics; and**

**provision one or more of the flow labels for one or more of the flows based on one or more of the flow characteristics.**

52. (Previously Presented) The system of Claim 51, the logic further operable to communicate one or more traffic characteristics associated with the end user to the serving node along with the new label stack.

53. (Canceled)

54. (Previously Presented) The system of Claim 51, the logic further operable to populate available information in a vendor extension field that is included as part of an agent solicitation message that is sent to the serving node.

55. (Previously Presented) The system of Claim 54, the logic further operable to:  
update the forwarding information with a selected one or more of an Internet  
protocol (IP) address associated with the data session, the session specific label, and traffic  
characteristics associated with the data session.